

10 20 30 40 50  
GACGGATCGGGAGATCTCCCGATCCCCTATGGTCGACTCTCAGTACAATC  
60 70 80 90 100  
TGCTCTGATGCCGCATAGTTAAGCCAGTATCTGCTCCCTGCTTGTGTGTT  
110 120 130 140 150  
GGAGGTCGCTGAGTAGTGCGCGAGCAAAATTTAAGCTACAACAAGGCAAG  
160 170 180 190 200  
GCTTGACCGACAATTGAGCTCGGTACCCGGGGAGATCCGGTAAGGACCAG  
210 220 230 240 250  
CTTCTTTGGGAGAGAACAGACGCAGGGGCGGGAGGGGAAAAAGGGAGAGGC  
260 270 280 290 300  
AGACGTCACTTCCCCTTGGCGGCTCTGGCAGCAGATTGGTCGGTTGAGTG  
310 320 330 340 350  
GCAGAAAGGCAGACGGGGACTGGGCAAGGCACTGTCGGTGACATCACGGA  
360 370 380 390 400  
CAGGGCGACTTCTATGTAGATGAGGCAGCGCAGAGGCTGCTGCTTCGCCA  
410 420 430 440 450  
CTTGCTGCTTCACCACGAAGGAGTTCCCGTGCCCTGGGAGCGGGTTCAGG  
460 470 480 490 500  
ACCGCTGATCGGAAGTGAGAATCCCAGCTGTGTGTCAGGGCTGGAAAGGG  
510 520 530 540 550  
CTCGGGAGTGCGCGGGGCAAGTGACCGTGTGTGTAAAGAGTGAGGCGTAT  
560 570 580 590 600  
GAGGCTGTGTCGGGGCAGAGGCCCAAGATCTCAAGGGCCCATAACATGTG  
610 620 630 640 650  
TACCATCGATTGCAGGGGAGATACCATGATCACGAAGGTGGTTTTCCAG  
660 670 680 690 700  
GGCGAGGCTTATCCATTGCACTCCGGATGTGCTGACCCCTGCGATTTC  
710 720 730 740 750  
CAAAGCTTGGAAACTCGACTGCATAATTTGTGGTAGTGGGGGACTGCGTT  
760 770 780 790 800  
CGCGCTTTCCCCTGACTTTCTGGAGTTTCAAAGTAGACTGTACGCTAAC  
810 820 830 840 850  
CGGATCCTCTAGAGTCGACCTGCAGGCATGCAGAAGACAATTAGCAGGCA  
860 870 880 890 900  
TGCTGGGGATGCGGTGGGCTCTATGGCTTCTGAGGCGGAAAGAACCAGCT  
910 920 930 940 950  
GGGGCTCTAGGGGGTATCCCCACGCGCCCTGTAGCGGCGCATTAAGCGCG

Fig. 1A

960 970 980 990 1000  
GCGGGTGTGGTGGTTACGCGCAGCGTGACCGCTACACTTGCCAGCGCCCT  
1010 1020 1030 1040 1050  
AGCGCCCGCTCCTTTTCGCTTTCTTCCCTTCCTTTCTCGCCACGTTTCGCCG  
1060 1070 1080 1090 1100  
GCTTTCCCCGTCAAGCTCTAAATCGGGGCATCCCTTTAGGGTTCCGATTT  
1110 1120 1130 1140 1150  
AGTGCTTTACGGCACCTCGACCCCAAAAACTTGATTAGGGTGATGGTTC  
1160 1170 1180 1190 1200  
ACGTAGTGGGCCATCGCCCTGATAGACGGTTTTTCGCCCTTTGACGTTGG  
1210 1220 1230 1240 1250  
AGTCCACGTTCTTTAATAGTGGACTCTTGTTCCAAACTGGAACAACACTC  
1260 1270 1280 1290 1300  
AACCCCTATCTCGGTCTATTCTTTTGATTTATAAGGGATTTTGGGGATTTTC  
1310 1320 1330 1340 1350  
GGCCTATTGGTTAAAAAATGAGCTGATTTAACAAAAATTTAACGCGAATT  
1360 1370 1380 1390 1400  
AATTCTGTGGAATGTGTGTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCC  
1410 1420 1430 1440 1450  
CAGGCAGGCAGAAGTATGCAAAGCATGCATCTCAATTAGTCAGCAACCAG  
1460 1470 1480 1490 1500  
GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGC  
1510 1520 1530 1540 1550  
ATCTCAATTAGTCAGCAACCATAGTCCCGCCCCCTAACTCCGCCCATCCCG  
1560 1570 1580 1590 1600  
CCCCTAACTCCGCCCAGTTCCGCCCATTCTCCGCCCCATGGCTGACTAAT  
1610 1620 1630 1640 1650  
TTTTTTTATTTATGCAGAGGCCGAGGCCGCCTCTGCCTCTGAGCTATTCC  
1660 1670 1680 1690 1700  
AGAAGTAGTGAGGAGGCTTTTTTTGGAGGCCTAGGCTTTTGCAAAAAGCTC  
1710 1720 1730 1740 1750  
CCGGGAGCTTGTATATCCATTTTCGGATCTGATCAGCACGTGTTGACAAT  
1760 1770 1780 1790 1800  
TAATCATCGGCATAGTATATCGGCATAGTATAATACGACAAGGTGAGGAA  
1810 1820 1830 1840 1850  
CTAAACCATGGCCAAGTTGACCAGTGCCGTTCCGGTGCTCACCGCGCGCG  
1860 1870 1880 1890 1900  
ACGTCGCCGGAGCGGTTCGAGTTCTGGACCGACCGGCTCGGGTTCTCCCGG

**Fig. 1B**

1910 1920 1930 1940 1950  
GACTTCGTGGAGGACGACTTCGCCGGTGTGGTCCGGGACGACGTGACCCT  
1960 1970 1980 1990 2000  
GTTTCATCAGCGCGGTCCAGGACCAGGTGGTGCCGGACAACACCCTGGCCT  
2010 2020 2030 2040 2050  
GGGTGTGGGTGCGCGGCCTGGACGAGCTGTACGCCGAGTGGTCCGAGGTC  
2060 2070 2080 2090 2100  
GTGTCCACGA ACTTCCGGGACGCCTCCGGGCCGGCCATGACCGAGATCGG  
2110 2120 2130 2140 2150  
CGAGCAGCCGTGGGGGCGGGAGTTCGCCCTGCGCGACCCGGCCGGCAACT  
2160 2170 2180 2190 2200  
GCGTGCACTTCGTGGCCGAGGAGCAGGACTGACACGTGCTACGAGATTTC  
2210 2220 2230 2240 2250  
GATTCCACCGCCGCCTTCTATGAAAGGTTGGGCTTCGGAATCGTTTTCCG  
2260 2270 2280 2290 2300  
GGACGCCGCTGGATGATCCTCCAGCGCGGGGATCTCATGCTGGAGTTCT  
2310 2320 2330 2340 2350  
TCGCCCACCCCAACTTGTTTATTGCAGCTTATAATGGTTACAAATAAAGC  
2360 2370 2380 2390 2400  
AATAGCATCACAAATTTACAAATAAAGCATTTTTTTTCACTGCATTCTAG  
2410 2420 2430 2440 2450  
TTGTGGTTTGTCCAACTCATCAATGTATCTTATCATGTCTGTATACCGT  
2460 2470 2480 2490 2500  
CGACCTCTAGCTAGAGCTTGGCGTAATCATGGTCATAGCTGTTTCCTGTG  
2510 2520 2530 2540 2550  
TGAAATTGTTATCCGCTCACAATTCCACACAACATACGAGCCGGAAGCAT  
2560 2570 2580 2590 2600  
AAAGTGTAAGCCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAATTG  
2610 2620 2630 2640 2650  
CGTTGCGCTCACTGCCCGCTTTCCAGTCGGGAAACCTGTCGTGCCAGCTG  
2660 2670 2680 2690 2700  
CATTAATGAATCGGCCAACGCGCGGGGAGAGGCGGTTTGCGTATTGGGCG  
2710 2720 2730 2740 2750  
CTCTTCCGCTTCCTCGCTCACTGACTCGCTGCGCTCGGTCGTTCGGCTGC  
2760 2770 2780 2790 2800  
GGCGAGCGGTATCAGCTCACTCAAAGGCGGTAATACGGTTATCCACAGAA  
2810 2820 2830 2840 2850  
TCAGGGGATAACGCAGGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGC

Fig. 1C

2860 2870 2880 2890 2900  
CAGGAACCGTAAAAAGGCCGCGTTGCTGGCGTTTTTCCATAGGCTCCGCC  
2910 2920 2930 2940 2950  
CCCCTGACGAGCATCACAAAAATCGACGCTCAAGTCAGAGGTGGCGAAAC  
2960 2970 2980 2990 3000  
CCGACAGGACTATAAAGATACCAGGCGTTTCCCCCTGGAAGCTCCCTCGT  
3010 3020 3030 3040 3050  
GCGCTCTCCTGTTCCGACCCTGCCGCTTACCGGATACCTGTCCGCCTTTC  
3060 3070 3080 3090 3100  
TCCCTTCGGGAAGCGTGGCGCTTTCTCAATGCTCACGCTGTAGGTATCTC  
3110 3120 3130 3140 3150  
AGTTCGGTGTAGGTCGTTTCGCTCCAAGCTGGGCTGTGTGCACGAACCCCC  
3160 3170 3180 3190 3200  
CGTTCAGCCCGACCGCTGCGCCTTATCCGGTAACTATCGTCTTGAGTCCA  
3210 3220 3230 3240 3250  
ACCCGGTAAGACACGACTTATCGCCACTGGCAGCAGCCACTGGTAACAGG  
3260 3270 3280 3290 3300  
ATTAGCAGAGCGAGGTATGTAGGCGGTGCTACAGAGTTCTTGAAGTGGTG  
3310 3320 3330 3340 3350  
GCCTAACTACGGCTACACTAGAAGGACAGTATTTGGTATCTGCGCTCTGC  
3360 3370 3380 3390 3400  
TGAAGCCAGTTACCTTCGGAAAAAGAGTTGGTAGCTCTTGATCCGGCAAA  
3410 3420 3430 3440 3450  
CAAACCACCGCTGGTAGCGGTGGTTTTTTTTGTTTGCAAGCAGCAGATTAC  
3460 3470 3480 3490 3500  
GCGCAGAAAAAAGGATCTCAAGAAGATCCTTTGATCTTTTCTACGGGGT  
3510 3520 3530 3540 3550  
CTGACGCTCAGTGGAACGAAACTCACGTTAAGGGATTTTGGTCATGAGA  
3560 3570 3580 3590 3600  
TTATCAAAAAGGATCTTCACCTAGATCCTTTTAAATTAAAAATGAAGTTT  
3610 3620 3630 3640 3650  
TAAATCAATCTAAAGTATATATGAGTAAACTTGGTCTGACAGTTACCAAT  
3660 3670 3680 3690 3700  
GCTTAATCAGTGAGGCACCTATCTCAGCGATCTGTCTATTTTCGTTTCATCC  
3710 3720 3730 3740 3750  
ATAGTTGCCTGACTCCCCGTGCTGTAGATAACTACGATACGGGAGGGCTT  
3760 3770 3780 3790 3800  
ACCATCTGGCCCCAGTGCTGCAATGATACCGCGAGACCCACGCTCACCGG

**Fig. 1D**

3810 3820 3830 3840 3850  
CTCCAGATTTATCAGCAATAAACCAGCCAGCCGGAAGGGCCGAGCGCAGA  
3860 3870 3880 3890 3900  
AGTGGTCCTGCAACTTTATCCGCCTCCATCCAGTCTATTAATTGTTGCCG  
3910 3920 3930 3940 3950  
GGAAGCTAGAGTAAGTAGTTCGCCAGTTAATAGTTTGCAGCAACGTTGTTG  
3960 3970 3980 3990 4000  
CCATTGCTACAGGCATCGTGGTGTACGCTCGTCGTTTGGTATGGCTTCA  
4010 4020 4030 4040 4050  
TTCAGCTCCGGTTCCCAACGATCAAGGCGAGTTACATGATCCCCCATGTT  
4060 4070 4080 4090 4100  
GTGCAAAAAGCGGTTAGCTCCTTCGGTCCTCCGATCGTTGTCAGAAGTA  
4110 4120 4130 4140 4150  
AGTTGGCCGCAAGTGTATCACTCATGGTTATGGCAGCACTGCATAATTCT  
4160 4170 4180 4190 4200  
CTTACTGTCATGCCATCCGTAAGATGCTTTTCTGTGACTGGTGAGTACTC  
4210 4220 4230 4240 4250  
AACCAAGTCATTCTGAGAATAGTGTATGCGGCGACCGAGTTGCTCTTGCC  
4260 4270 4280 4290 4300  
CGGCGTCAATACGGGATAATACCGCGCCACATAGCAGAACTTTAAAAGTG  
4310 4320 4330 4340 4350  
CTCATCATTGGAAAACGTTCTTCGGGGCGAAACTCTCAAGGATCTTACC  
4360 4370 4380 4390 4400  
GCTGTTGAGATCCAGTTCGATGTAACCCACTCGTGCACCCAACTGATCTT  
4410 4420 4430 4440 4450  
CAGCATCTTTTACTTTTACCAGCGTTTCTGGGTGAGCAAAAACAGGAAGG  
4460 4470 4480 4490 4500  
CAAAATGCCGCAAAAAGGGAATAAGGGCGACACGGAAATGTTGAATACT  
4510 4520 4530 4540 4550  
CATACTCTTCCTTTTTCAATATTATTGAAGCATTTATCAGGGTTATTGTC  
4560 4570 4580 4590 4600  
TCATGAGCGGATACATATTTGAATGTATTTAGAAAAATAAACAAATAGGG  
4610 4620 4630  
GTTCCGCGCACATTTCCCCGAAAAGTGCCACCTGACGTC

**Fig. 1E**

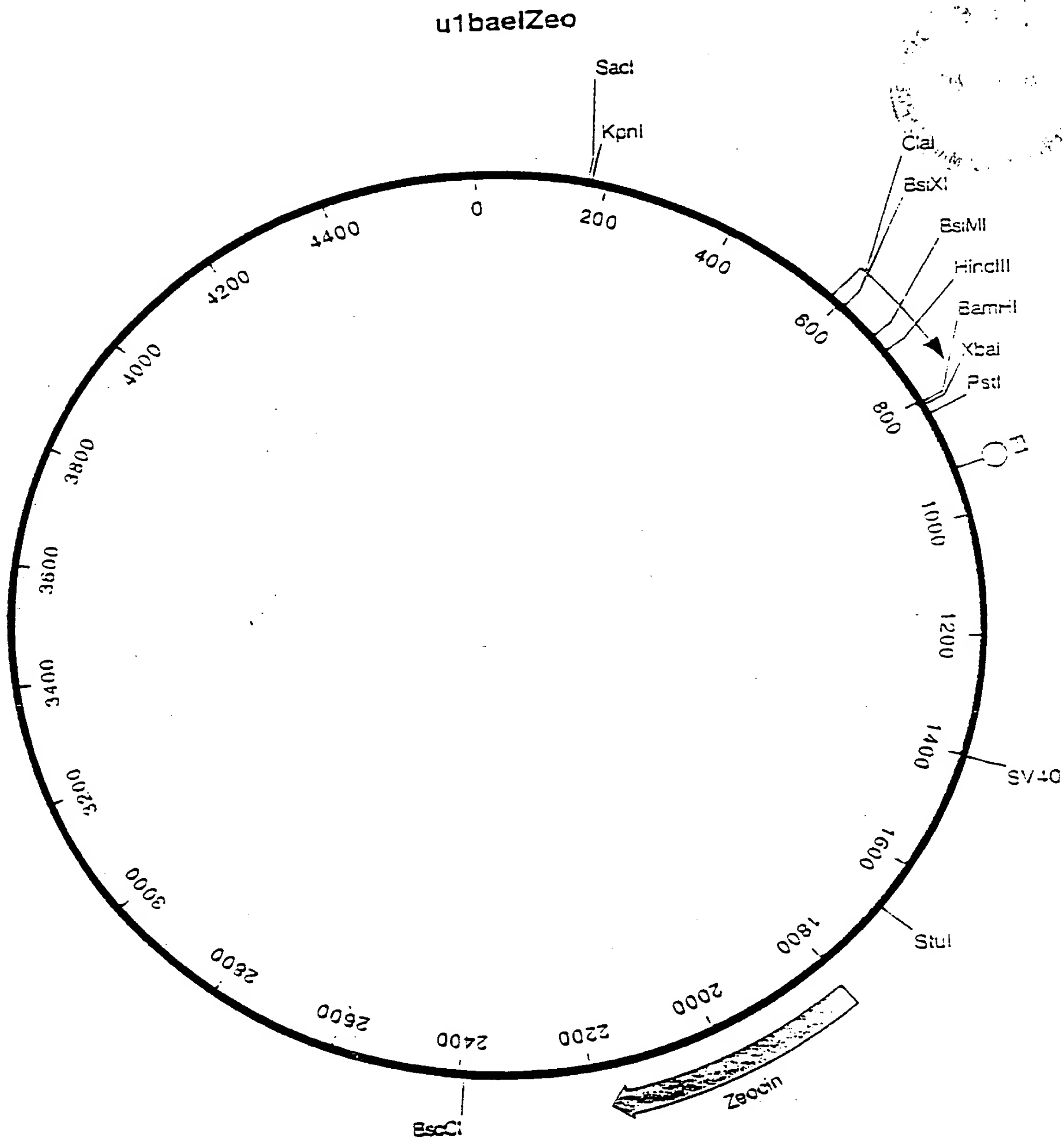
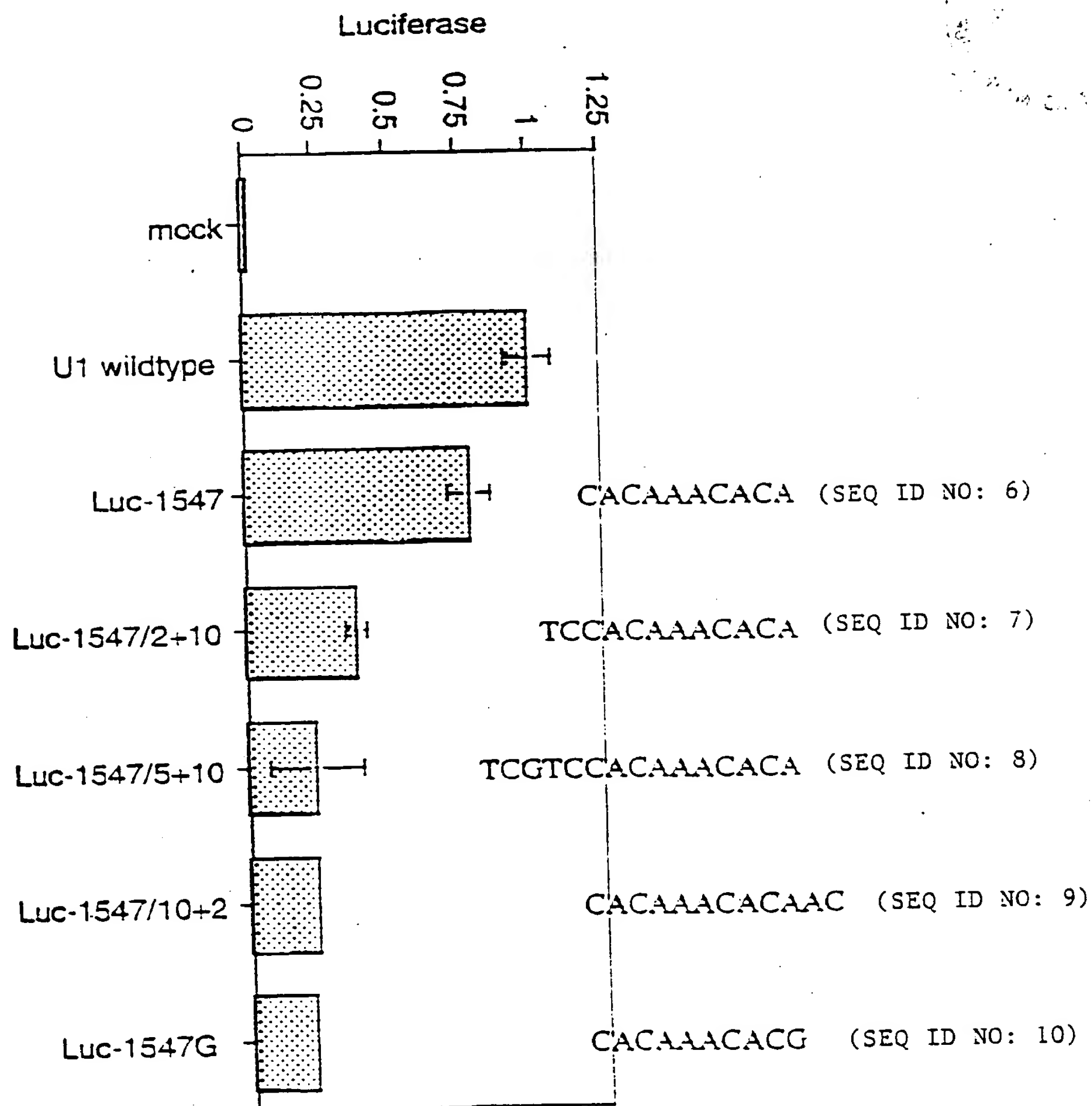


Fig. 2



**Fig. 3**

## Bae1/U1 construct

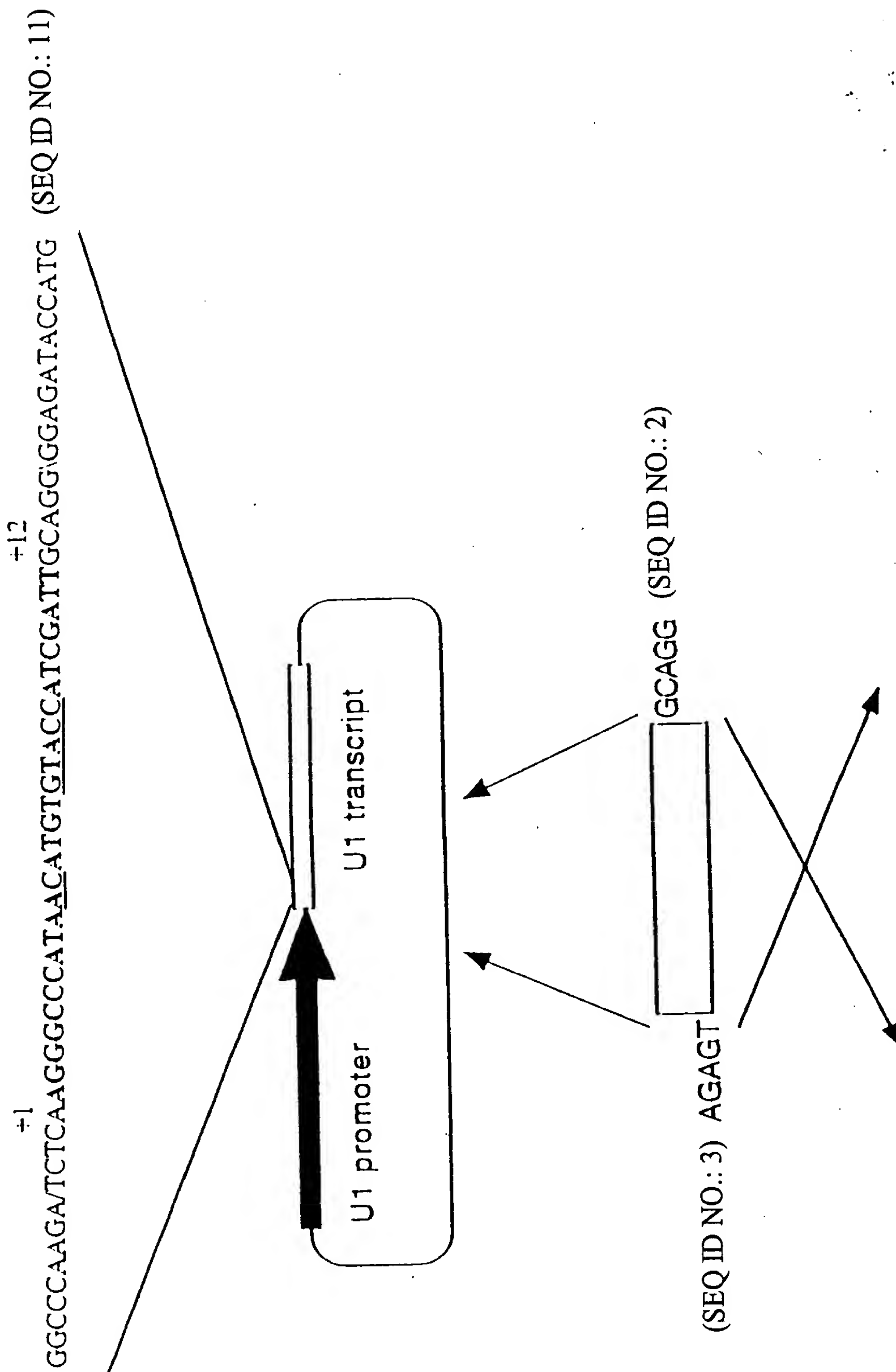


Fig. 4